What is claimed is:

1. A refrigerating oil composition comprising

a refrigerant (A) containing as a predominant component a C1-C8 hydrocarbon compound and

a base oil (B) composed of a polyalkylene glycol ether represented by formula (I):

$$R^{1}$$
 $-0$  (CH<sub>2</sub>CH<sub>0</sub>)  $_{m}$  $-$ (CH<sub>2</sub>CH<sub>2</sub>O)  $_{n}$  $-R^{2}$  · · · (I)

wherein each of  $R^1$  and  $R^2$  represents a hydrogen atom, a C1-C18 hydrocarbon group, or a C2-C18 acyl group, provided that  $R^1$  and  $R^2$  are not simultaneously hydrogen atoms; each of m and n is an integer of 1 or more; and n/(m+n) is more than 0.4, and/or a polyvinyl ether represented by formula (II):

$$R^3$$
— $(CH_2CH)_p$ — $(CH_2CH)_q$ — $R^4$  · · · (II)

wherein each of  $R^3$  and  $R^4$  represents a hydrogen atom, a C1-C18 hydrocarbon group, or a C2-C18 acyl group;  $R^5$  represents a C1-C4 hydrocarbon group;  $R^6$  represents a C2-C4 hydrocarbon group, provided that the number of carbon atoms contained in  $R^6$  is greater than that of carbon atoms contained in  $R^5$ ; p is an integer of 1 or more; and q is an integer of 0 or more,

and satisfying the following conditions:

(i) solubility of the refrigerant (A) in the base oil (B) is 40 mass% or less at 40°C and 1.2 MPa and

- (ii) mixture viscosity of the refrigerating oil composition is 0.1 mm<sup>2</sup>/s or more at 90°C and 2.3 MPa.
- 2. A refrigerating oil composition as described in claim 1, wherein p/(p+q) in formula (II) is 0.1 or more.
- 3. A refrigerating oil composition as described in claim 2, wherein  $R^5$  in formula (II) is a methyl group.
- 4. A refrigerating oil composition as described in any one of claims 1 to 3, wherein the solubility of the refrigerant (A) in the base oil (B) is 2 to 40 mass% at 40°C and 1.2 MPa.
- 5. A refrigerating oil composition as described in claim 4, wherein the solubility of the refrigerant (A) in the base oil (B) is 2 to 30 mass% at 40°C and 1.2 MPa.
- 6. A refrigerating oil composition as described in claim 5, wherein the solubility of the refrigerant (A) in the base oil (B) is 5 to 25 mass% at 40°C and 1.2 MPa.
- 7. A refrigerating oil composition as described in any one of claims 1 to 6, which exhibits a mixture viscosity of  $0.5~\mathrm{mm}^2/\mathrm{s}$  or more at  $90^{\circ}\mathrm{C}$  and  $2.3~\mathrm{MPa}$ .
- 8. A refrigerating oil composition as described in any one of claims 1 to 7, wherein the base oil (B) has a weight average molecular weight (Mw) of 500 or more.
- 9. A refrigerating oil composition as described in any one of claims 1 to 8, wherein the base oil (B) has an oxygen atom content of 10 mass% or more.